Title (en)

NOVEL PHOTOSENSITIVE POLYBENZOXAZOLE PRECURSOR COMPOSITIONS

Title (de)

LICHTEMPFINDLICHE ZUSAMMENSETZUNGEN MIT POLYBENZOXAZOL-VORSTUFEN

Title (fr)

COMPOSITIONS PHOTOSENSIBLES AVEC PRECURSEUR A BASE DE POLYBENZOXADOLE

Publication

EP 1171801 A4 20050907 (EN)

Application

EP 99950004 A 19990929

Priority

- US 9922617 W 19990929
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- US 40490499 A 19990924

Abstract (en)

[origin: WO0019273A1] A heat resistant positive-working photosensitive composition that has a polybenzoxazole precursor bearing acid labile functional groups, a photoacid generator, a photosensitizer, and a solvent. The polybenzoxazole precursor bearing acid labile functional groups, has the structure (I) wherein k1 is an integer of 1 or 2, k2 is an interger of 0 or 1, and the sum of k1 and k2 is 2; Ar1 is a tetravalent aromatic, aliphatic, or heterocyclic group, or mixtures thereof; Ar2 is a divalent aromatic, aliphatic, or heterocyclic group or siloxane group; D is a monovalent acid labile group; and n is an integer from 20 to 200. A portion of Ar1 can be a divalent aromatic, aliphatic, or heterocyclic diamine moiety such that the fraction of diamine compound is 0-60 mole percent and the sum of diamine and diamino dihydroxy compound is 100 %. Preparation of chemical amplification based positive-working, aqueous base developable photosensitive polybenzoxazole (PBO) precursors, the formulation of the resin composition, and the process for preparing heat-resistant relief structures from this resin composition. The positive photosensitive resin compositions are suitable especially for applications in microelectronics.

IPC 1-7

G03F 7/004; G03F 7/039; C08G 73/22

IPC 8 full level

G03F 7/037 (2006.01); **C08G 73/22** (2006.01); **C08K 5/00** (2006.01); **C08L 79/04** (2006.01); **G03F 7/004** (2006.01); **G03F 7/039** (2006.01); **H01L 21/027** (2006.01); G03F 7/075 (2006.01)

CPC (source: EP KR US)

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